

SEQUENCE LISTING

<110> Rea-Min Chu

Ching-Yi Lin

Ya-Wen Hsiao

Kuang-Wen Liao

<120> COMPLEX IMMUNO-GENE MEDICAL COMPOSITION FOR INHIBITING TUMOR CELLS

<160>4

<210>1

<211>636

<212>mRNA and PRT

<213>Human

<221>IL-6

<300>

<308>NCBI pubmed Genbank : Accession No. : NM_000600

<400>1

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Met	Asn	Ser	Phe	Ser	Thr	Thr	Ser	Ala	Phe	Gly	Pro	Val	Ala	Phe	Ser	Leu	Gly	Leu	Leu	Leu	Leu	Leu		
1				5						10					15							20		
123	gtg	ttg	cct	gct	gcc	138	ttc	cct	gcc	cca	gta	ccc	cca	gga	gaa	gat	168	tcc	aaa	gat	gta	gcc	120	
Val	Leu	Pro	Ala	Ala	Phe	Phe	Pro	Ala	Pro	Val	Pro	Pro	Pro	Gly	Glu	Asp	Ser	Lys	Asp	Val	Ala	Ala		
				25						30						35						40		
183	gcc	cca	cac	aga	cag	198	cca	ctc	acc	tct	tca	213	gaa	cga	att	gac	228	caa	att	cgg	tac	atc	180	
Ala	Pro	His	Arg	Gln	Pro	Pro	Leu	Thr	Ser	Ser	Glu	Glu	Arg	Ile	Asp	Lys	Gln	Ile	Arg	Tyr	Ile	Ile		
				45						50						55						60		
243	ctc	gac	ggc	atc	tca	258	gcc	ctg	aga	aag	gag	273	aca	tgt	aac	aag	288	aac	atg	tgt	gaa	agc	240	
Leu	Asp	Gly	Ile	Ser	Ala	Leu	Ala	Leu	Arg	Lys	Glu	Thr	Cys	Asn	Lys	Ser	Asn	Met	Cys	Glu	Ser	Ser		
				65						70						75						80		
303	agc	aaa	gag	gca	ctg	318	gca	gaa	aac	aac	ctg	333	aac	ctt	cca	aag	348	gct	gaa	aaa	gat	gga	300	
Ser	Lys	Glu	Ala	Leu	Ala	Glu	Ala	Asn	Asn	Leu	Asn	Asn	Leu	Leu	Pro	Lys	Met	Ala	Glu	Lys	Asp	Gly	Gly	
				85						90						95						100		
363	tgc	ttc	caa	tct	gga	378	ttc	aat	gag	gag	act	393	tgc	ctg	gtg	aaa	408	atc	act	ggg	ctt	ttg	360	
Cys	Phe	Gln	Ser	Gly	Phe	Asn	Asn	Glu	Glu	Thr	Cys	Cys	Leu	Val	Lys	Ile	Ile	Thr	Gly	Leu	Leu	Leu		
				105						110						115						120		
423						438						453					468							

gag	ttt	gag	gta	tac	cta	cag	tac	ctc	cag	aac	aga	ttt	gag	agt	agt	gag	gaa	caa	gcc	420
Glu	Phe	Glu	Val	Tyr	Leu	Glu	Tyr	Leu	Gln	Asn	Arg	Phe	Glu	Ser	Ser	Glu	Glu	Gln	Ala	
				125					130					135					140	
483					498				513					528						
aga	gct	gtg	cag	atg	agt	aca	aaa	gtc	ctg	atc	cag	ttc	ctg	cag	aaa	aag	gca	aag	aat	480
Arg	Ala	Val	Gln	Met	Ser	Thr	Lys	Val	Leu	Ile	Gln	Phe	Leu	Gln	Lys	Lys	Ala	Lys	Asn	
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543					558				573					588						
cta	gat	gca	ata	acc	acc	cct	gac	cca	acc	aca	aat	gcc	agc	ctg	ctg	acg	aag	ctg	cag	540
Leu	Asp	Ala	Ile	Thr	Thr	Pro	Asp	Pro	Thr	Thr	Asn	Ala	Ser	Leu	Leu	Thr	Lys	Leu	Gln	
				165					170					175					180	
603					618				633					648						
gca	cag	aac	cag	tgg	ctg	cag	gac	atg	aca	act	cat	ctc	att	ctg	cgc	agc	ttt	aag	gag	600
Ala	Gln	Asn	Gln	Trp	Leu	Gln	Asp	Met	Thr	Thr	His	Leu	Ile	Leu	Arg	Ser	Phe	Lys	Glu	
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663					678				693					636						
ttc	ctg	cag	tcc	agc	ctg	agg	gct	ctt	cgg	caa	atg									
Phe	Leu	Gln	Ser	Ser	Leu	Arg	Ala	Leu	Arg	Gln	Met									
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<212>mRNA and PRT

<213>Human

<221>IL-2 Signal Peptide

<300>

<308>NCBI pubmed Genbank ; Accession No. : V00564

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<211>342

<212>mRNA and PRT

<213>Human

<221>Partial Sequence Encoding Human IL-15

<300>

<308>NCBI pubmed Genbank : Accession No. : U14407

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Asn	Trp	Val	Asn	Val	Ile	Ser	Asp	Leu	Lys	Lys	Ile	Glu	Asp	Leu	Ile	Gln	Ser	Met	His	
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att	gat	gct	act	tta	tat	acg	gaa	agt	gat	ggt	cac	ccc	agt	tgc	aaa	gta	aca	gca	atg	120
Ile	Asp	Ala	Thr	Leu	Tyr	Thr	Glu	Ser	Asp	Val	His	Pro	Ser	Cys	Lys	Val	Thr	Ala	Met	
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aag	tgc	ttt	ctc	ttg	gag	tta	caa	gtt	att	tca	ctt	gag	tcc	gga	gat	gca	agt	att	cat	180
Lys	Cys	Phe	Leu	Leu	Glu	Leu	Gln	Val	Ile	Ser	Leu	Glu	Ser	Gly	Asp	Ala	Ser	Ile	His	
				45					50					55					60	
gat	aca	gta	gaa	aat	ctg	atc	atc	cta	gca	aac	aac	agt	ttg	tct	tct	aat	ggg	aat	gta	240
Asp	Thr	Val	Glu	Asn	Leu	Ile	Ile	Leu	Ala	Asn	Asn	Ser	Leu	Ser	Ser	Asn	Gly	Asn	Val	
				65					70					75					80	
aca	gaa	tct	gga	tgc	aaa	gaa	tgt	gag	gaa	ctg	gag	gaa	aaa	aat	att	aaa	gaa	ttt	ttg	300
Thr	Glu	Ser	Gly	Cys	Lys	Glu	Cys	Glu	Glu	Leu	Glu	Glu	Lys	Asn	Ile	Lys	Glu	Phe	Leu	
				85					90					95					100	
cag	agt	ttt	gta	cat	att	gtc	caa	atg	ttc	atc	aac	act	tct							
Gln	Ser	Phe	Val	His	Ile	Val	Gln	Met	Phe	Ile	Asn	Thr	Ser							
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<210>4

<211>402

<212>mRNA and PRT

<213> Artificial Chimeric Sequence

<220>

<221> IL-2SP/IL-15MP

<223> Artificial Chimeric Sequence Encoding IL-2SP/IL-15MP

<300>

<308>NCBI pubmed Genbank : IL-2 Accession No. : V00564

IL-15 Accession No. : U14407

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Met	Tyr	Arg	Met	Gln	Leu	Leu	Ser	Cys	Ile	Ala	Leu	Ser	Leu	Ala	Leu	Val	Thr	Asn	Ser	
1				5					10					15					20	
Sequence encoding IL-2signal peptide																				
aac	tgg	gtg	aat	gta	ata	agt	gat	ttg	aaa	aaa	att	gaa	gat	ctt	att	caa	tct	atg	cat	120
Asn	Trp	Val	Asn	Val	Ile	Ser	Asp	Leu	Lys	Lys	Ile	Glu	Asp	Leu	Ile	Gln	Ser	Met	His	
				25					30					35					40	

att Ile	gat Asp	gct Ala	act Thr	tta Leu 45	tat Tyr	acg Thr	gaa Glu	agt Ser	gat Asp 50	gtt Val	cac His	ccc Pro	agt Ser	tgc Cys 55	aaa Lys	gta Val	aca Thr	gca Ala	atg Met 60	180
aag Lys	tgc Cys	ttt Phe	ctc Leu	ttg Leu 65	gag Glu	tta Leu	caa Gln	gtt Val	att Ile 70	tca Ser	ctt Leu	gag Glu	tcc Ser	gga Gly 75	gat Asp	gca Ala	agt Ser	att Ile	cat His 80	240
gat Asp	aca Thr	gta Val	gaa Glu	aat Asn 85	ctg Leu	atc Ile	atc Ile	cta Leu	gca Ala 90	aac Asn	aac Asn	agt Ser	ttg Leu	tct Ser 95	tct Ser	aat Asn	ggg Gly	aat Asn	gta Val 100	300
aca Thr	gaa Glu	tct Ser	gga Gly	tgc Cys 105	aaa Lys	gaa Glu	tgt Cys	gag Glu	gaa Glu 110	ctg Leu	gag Glu	gaa Glu	aaa Lys	aat Asn 115	att Ile	aaa Lys	gaa Glu	ttt Phe	ttg Leu 120	360
cag Gln	agt Ser	ttt Phe	gta Val	cat His 125	att Ile	gtc Val	caa Gln	atg Met	ttc Phe 130	atc Ile	aac Asn	act Thr	tct Ser							402